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PCT/US2004/022954

PU030207

Patent Cooperation Treaty
International Preliminary Examining Authority - IPEA/EP

Applicant: THOMSON LICENSING S.A./Lefevre (U.S. only)
Int'l Appln. No.: PCT/US2004/022954
Int'l Filing Date: 16 July 2004 (16.07.04)
Title of Invention: PERSONAL VIDEO RECORDER THAT RECORDS
THROUGH CHANNEL CHANGE

FIRST OPINION REPLY/AMENDMENT UNDER PCT ARTICLE 34

Attn: IPEA/EP
European Patent Office
D-80298 Munich, Germany

Sir:

Applicants respectfully request that the following arguments and claim amendments be entered into the file of the above-identified international application.

Substitute sheets 11-12 are being provided to replace existing sheets for the claims. Claims 1-3, 5-9 and 11 remain in the application. Claims 1 and 6 have been amended. Claims 4 and 10 have been cancelled. Claims 2-3, 7-9 and 11 are unchanged.

REMARKS

Independent claim 1 has been amended to include the limitations of claim 4. Similarly, independent claim 6 has been amended to include the limitations of claim 10. Amended claims 1 and 6 each recite the features of receiving a rewind trick mode request, presenting the second stream of multimedia content in reverse, and presenting the first stream of multimedia content in reverse after reaching a beginning of the second stream of multimedia content. The Written Opinion of the International Searching Authority asserts that these features, which were previously recited in dependent claims 4 and 10, lack inventive step in light of U.S. Patent

Application Publication No. U.S. 2003/0063893 to Read and U.S. Patent Application Publication No. US 2001/0036355 to Kelly et al. Applicant respectfully disagrees.

Inasmuch as Read teaches a technique for rapid channel change in a personal video recorder (PVR) by bypassing the normal process of storing video to a hard disk drive and then retrieving the video for display, Read's teachings differ from the Applicant's invention. Specifically, Read does not teach, suggest or contemplate presenting the video in reverse. Indeed, when a channel change occurs, Read teaches that the newly received video is routed directly to a display, yet Read makes no mention of reversing back to video displayed earlier from the previous channel. Moreover, Read does not teach or suggest any features which would facilitate such reverse playback. At most Read teaches that video playback can be paused. However, pausing video playback merely requires a particular frame be continuously repeated until a new command is received. Implementing reverse playback through multiple streams of multimedia content, however, requires a significantly different process, one embodiment of which is disclosed in Applicant's specification.

Kelly has little more in common with Applicant's invention other than both inventions relate to video signals. Whereas Applicant's invention provides a method and apparatus which enables one to reverse back through video content that was previously viewed, even through channel changes, Kelly is directed to various methods for producing an edited MPEG stream from two streams recorded in a transport stream-format. Importantly, there is no teaching or suggestion of generating the two source streams in reverse from the edited MPEG stream that has been produced. Moreover, as with Read, Kelly never even mentions reverse playback anywhere in his specification. Accordingly, Kelly also fails to teach, suggest or contemplate the claimed invention.

In light of the foregoing, the Applicant respectfully believes that claims 1-5, 7-9 and 11 recite an invention that is novel and involves an inventive step over the cited

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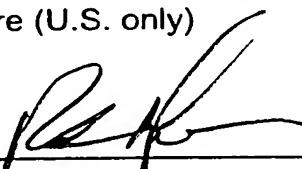
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reference. The Applicant requests a favorable opinion at the Examiner's earliest convenience. The Applicant invites the Examiner to call the undersigned if it is believed that a telephonic interview would clarify any issues raised herein. Please feel free to call the undersigned if any questions regarding this case arise.

Respectfully submitted,

THOMSON LICENSING, S.A./
Lefevre (U.S. only)

By: 

Robert B. Levy
Attorney for Applicant
Registration No. 28,234
Phone: 609-734-6820

Patent Operations
Thomson Multimedia Licensing Inc.
2 Independence Way, Suite 200
P. O. Box 5312
Princeton, New Jersey 08543-5312, US

Date: 2/14/05

Claims

1. A method for time-shifting a presentation of multimedia content using a recorder comprising:
 - receiving a first stream of multimedia content on a first channel;
 - storing the first stream of multimedia content to a data store associated with the recorder;
 - receiving a channel change request;
 - receiving a second stream of multimedia content on a second channel correlating to the channel change request;
 - storing the second stream of multimedia content to the data store while retaining the first stream of multimedia content in the data store;
 - receiving a rewind trick mode request;
 - presenting the second stream of multimedia content in reverse; and
 - presenting the first stream of multimedia content in reverse after reaching a beginning of the second stream of multimedia content.
15. 2. The method according to claim 1 further comprising assigning at least one identifier to each of the first and second streams of multimedia content to identify a sequence in which the first and second streams of multimedia content are recorded.
3. The method according to claim 1 further comprising assigning at least one identifier to each of the first and second streams of multimedia content to identify a channel from which the first and second streams of multimedia content are recorded.
20. 4. Canceled.
5. The method according to claim 1 further comprising:
 - receiving a play request;
 - presenting the first stream of multimedia content; and
 - presenting the second stream of multimedia content after reaching an end of the first stream of multimedia content.

6. A recorder comprising:

- an input port for receiving a first stream of multimedia content on a first channel;
- a data store for storing the first stream of multimedia content;
- a user interface for receiving a channel change request;
- 5 a processor for changing a channel to receive through the input port a second stream of multimedia content on a second channel correlating to the channel change request and storing the second stream of multimedia content to the data store while retaining the first stream of multimedia content in the data store; and
- a video decoder that presents the second stream of multimedia content in reverse, then
- 10 presents the first stream of multimedia content in reverse after reaching a beginning of the second stream of multimedia content.

7. The recorder of claim 6 wherein the processor further assigns at least one identifier to each of the first and second streams of multimedia content to identify a sequence in which the first and second streams of multimedia content are recorded.

15 8. The recorder of claim 6 wherein the processor further assigns at least one identifier to each of the first and second streams of multimedia content to identify a channel from which the first and second streams of multimedia content are recorded.

9. The recorder of claim 6, said user interface further comprising a user input device through which a user can choose a user selectable function to perform a desired recorder operation.

20 10. Canceled.

11. The recorder of claim 6 further comprising a video decoder that presents the first stream of multimedia content, then presents the second stream of multimedia content after reaching an end of the first stream of multimedia content.